**Study**: Subjects took two questionnaires. First, they filled out a survey rating different words on their meaningfulness or pleasantness. Scores were rated on a Likert scale from 1 (not meaningful, not pleasant) to 5 (very meaningful, very pleasant). These words were grouped into sets based on previous research, and the data set contains the averages for the words by set. Then they completed a meaning in life questionnaire (scores on questions were totaled).

**Important:** Work the whole assignment (i.e. normally you would stop if one of the steps or the interaction was not significant). Use the PIL total as the happiness scores for the DV. Remember to paste your output in this document and upload your R script to blackboard to complete this assignment.

**Dataset variables:**

IV X-Variables:

* Control variables: Age, gender, priming type (1=meaningful, 2=pleasantness)
* Education words (accomplish, College, Degree, Education, Grades, Graduate, School, Teacher, Undergrad, University, educ avg)
* Goals words (achieve, ambition, become, goals, progress, success, goals avg)
* Nouns words (everything, know, lot, many, mind, much, right, some, something, thing, time, what, when, noun avg)
* Religion words (serve, glorify, religion avg)

DV – Y-variable:

* PIL total – scores on the purpose in life questionnaire

**Moderation:**

Use goals and religion averages to predict happiness and determine if their interaction predicts different levels of happiness. See below.

**Power:**

1. Calculate the number of participants you would need for this analysis with a medium effect size for the interaction.
   1. Include a screen shot or summary of the numbers you typed into G\*Power, so we can give you partial credit if you get a different sample size than us.

**Moderation Analysis:**

1. Run the regressions:
   1. Include the LM output for your moderation.
   2. Is the overall model significant? List the *F* value in APA style.
   3. Are the main effects significant? List the coefficient values in APA style.
   4. Is the interaction significant? List the coefficient value in APA style.
   5. List the simple slopes in APA style:
      1. Low
      2. Average
      3. High
      4. Include the simple slopes output.
   6. Create a line graph of the interaction using graph.mod().
2. Write up:
   1. Include a short description of the variables/analysis.
   2. (no data screening, but you can paste in the old one from the HMLR homework in you want).
   3. Include the model *F* value and effect size.
   4. Include the main effects and interaction coefficients from above.
   5. Include the figure created above.
   6. Explain the interaction by listing the simple slopes for each of the low, average, and high groups for your moderator. Are they all significant? What do they mean (explain like you would a correlation)?